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CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society Of America

Vol. X DECEMBER, 1938 No. 6

A saguaro Christmas tree on the desert or an evergreen in the parlor—they all look alike to Santa Claus. From The Desert Magazine, El Centro, Calif.

CACTUS AND SUCCULENT JOURNAL

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EDITORIAL

About this time of year Editors should discard their dignity and aloofness and thank all those who have contributed to the JOURNAL or who have supported the cause by just being members of the Society. Without the active part of the members, our JOURNAL could not exist. Glance through your back issues and know that the contributors of the many notes and articles are wholly deserving of all credit. There are hundreds of others whose names are not mentioned and their criticism and encouragement is as helpful as the mass of information steadily pouring into the editorial office.

We regret that our friend in Germany, Herr Curt Backeberg, cannot be as optimistic as your Editor. He states, "But unfortunately, with this issue of the BFK. I must discontinue its publication! For four and a half years I have worked alone, in competition with the price of Journals which receive support and revenue from advertisements. I have never received any financial support, but have had to finance the whole publication myself and also cannot accept advertisements. What that means, everyone will realize. Besides this, the times have brought to all Societies a falling off in membership and with me too a reduction in readers. The other Journals are working, from the publisher's point of view, below cost! In consequence I can do no more."

We can appreciate that cactus magazines are far from profitable and Editors receive only glory for their efforts. The JOURNAL has always paid its own way—not from its advertisements, but from its subscriptions. We take exception to his statement that "all Societies are falling off" and in the U. S. A. their was never a greater interest in cactus and other succulents. We no longer wait for an "Angel" and know that our JOURNAL can always pay its own way. Our hope is to increase the revenue another $200 a month which would make possible two colored pictures a month. The color films are ready and we may make the JOURNAL a little more "chatty" so that it will appeal to more readers and thus make color possible.

The reception of "Cacti for the Amateur" makes its companion book on succulents a reality and the 5th volume to accompany *The Cactaceae* is already scheduled. Then should folow a complete book on succulents covering all genera on which monographs have not been published by that time.

Our one need is for all members to record the flowering dates of their succulents and how they are grown (indoors or out). With the increasing cooperation of our eastern friends our succulent literature will lose its apparent Californian predominance. Make notes now and send any photos of succulents so that our succulent book will fill the need.

We have just heard that the common Hen and Chickens survives the Vermont snows. This does not seem possible and we would appreciate a list of those which survive the cold. Vermont also reports that a Christmas Cactus (*Zygocactus truncatus*) has had a flower in the middle of November and is heavily budded.

We are also as anxious to hear from Hawaii, Australia, Canada, Cuba, S. America and Europe regarding their succulents. Won't you please send in your notes now?

This year we plan a national collection competition as suggested by Dr. Poindexter. This will take the place of a local cactus show and there will be all classes from one plant to such collections as that of H. O. Bullard's in N. J. What are your suggestions for making this a success?

As we start the year 1939 and approach the close of the JOURNAL'S 10th year we ask your continued support in enthusiasm and share your experiences. We have some fine material awaiting publication which, combined with the Illustrated Glossary and the aim for colored illustrations, should close our 10th year as a high mark to hit for during our second decade.

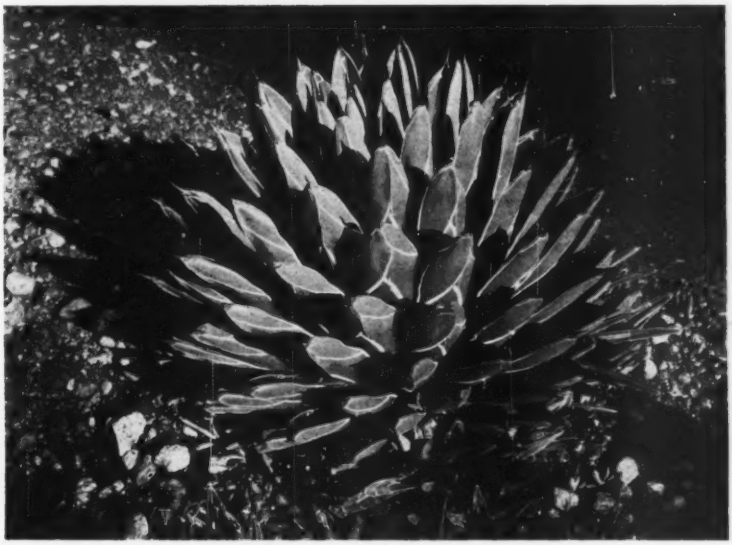
New Year's Greetings from the officers of the Society and your Editor.

SCOTT E. HASELTON.

A NEW BOTANICAL GARDEN

On February 12th, 1939, the Desert Botanical Garden of Arizona will be dedicated. This is Dedication and Donation Day. Over 800 acres in Papago Park have been allocated to the Arizona Cactus and Native Flora Society for development of a desert garden. We are asking donations of cash, botany books, desert plants from all deserts, and leaf mold. All are invited to this outstanding event. *Please come.*

Send all communications and donations to the President, Mrs. Gertrude D. Webster, P. O. Box 1973, Phoenix, Arizona.



Close-up of *Agave ferdinandi-regis* Berger

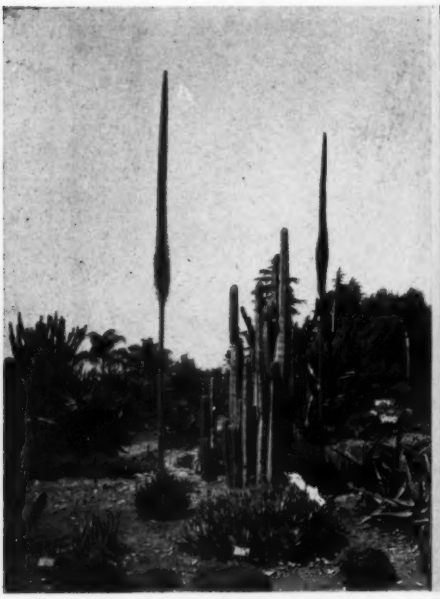
Additional Notes on Agaves Under Cultivation at the Huntington Botanical Gardens

By WILLIAM HERTRICH, *Curator Huntington Botanical Gardens*

The two species, *Agave polyacantha* Baker and *Agave atrovirens* Kark., mentioned in the September, 1938, issue of the *Cactus and Succulent Journal,* are very ornamental and, as previously stated, produce an abundance of flowers and seeds, but to my knowledge do not form bulbels. At least I have never observed this characteristic during many years of my experience with this type of plant; and yet I have occasionally noticed bulbels forming on minor sucker shoots which produce a few flowers at the same time that the inflorescence on the main shaft is developing, although bulbels are entirely absent on the main inflorescence.

The accompanying illustrations depict five more species of this interesting genus, all worthy of a place in any collection featuring these plants. *Agave victoriae-reginae* T. Moore and *Agave ferdinandi-regis* Berger are very closely related species, but perhaps the latter is not sufficiently distinct to warrant specific rank. However, as this may be, both plants are, to say the least, two of the most ornamental species of the entire genus. They may be described as small, compact, below average size, symmetrical, beautiful in design and adaptable to out-of-door planting in localities where the temperature does not fall below 18° F. Furthermore, as the root system of the two species is rather compact and flexible, they may be grown in containers long enough to attain maturity; they produce a full-sized shaft supporting a raceme literally covered with flowers—an impressive sight which lasts for nearly two months!

The plants are almost globular in shape with an average diameter of about 18 inches. Occasionally, specimens may attain a diameter of 30 inches. Leaves are rather stiff, short, straight or sometimes slightly curved inward, and are arranged in a pattern-like fashion on the plant.



Agave victoriae-reginae T. Moore (left) and *Agave ferdinandi-regis* Berger

Seed capsules set on *Agave victoriae-reginae*

The shaft, including raceme, reaches a height of from 12 to 15 feet. The specimen illustrated here measured 14 inches in height, 26 inches across, a shaft of 5 feet, 6 inches, and a raceme of 8 feet, 7 inches—totalling 15 feet, 3 inches. The plant flowered during the last half of July and through the entire month of August, 1938; produced 1805 flowers and set 441 seed pods at an age of 8 years, but produced no bulbels.

Agave victoriae-reginae very rarely suckers, but on the other hand, *Agave ferdinandi-regis,* established by Alwin Berger as a separate species (rather than as a variety of *Agave victoriae-reginae*) suckers very freely, as the illustration shows.

The main differences between the two species are, probably, in the length and shape of the leaves and end spine, and suckering habits of the latter. *Agave nickelsae* is a trade name often found in Southern California; this plant corresponds in all details with *Agave ferdinandi-regis.*

Agave carchariodonta Pampanini has virtually no trunk to speak of, but carries from 60 to 75 leaves, sometimes 2 feet long or more, arranged rather loosely and pointing in all directions. The specimen illustrated is one of several planted in 1930; it was a side shoot taken off a mother plant which flowered that year. Therefore, this particular plant can be considered to be about 10 years old when it bloomed. Thus far, six specimens have flowered in the Huntington Botanical Garden—all very prolific in setting seed pods in proporation to the number of flowers produced. This plant is 30 inches in height and slightly over 4 feet in diameter; leaves are rather stiff and very heavily armed along the margins. The shaft is 5 inches thick at base, 6 feet 11 inches to the first flower and together with the raceme measures 23 feet 3 inches in length. The flowering period in 1938 was from May 15th to July 11th; 2,932 flowers were produced and 1,936 seed capsules set. The average number per capsule (based on a count of 30) was 14, making the total seed production over 27,000. This species adds considerable interest to an outdoor group planting, its arched inflorescence being in direct contrast to the many species whose shafts extend skyward as straight as an arrow. It is more difficult to handle in a container because the rather stiff leaves are armed with sharp, hooked spines and terminate in a stiff end spine.

Agave fourcroydes Lem. has a trunk 2 feet in height and carries from 80 to 100 ascending leaves, about 4 inches broad and from 6 to 7 feet in length. The plant is often found in the trade under the name of *Agave longifolia* and is, with *Agave sisalana,* one of the foremost com-

Agave carchariodonta Pampanini in flower

Close-up of the same plant

Agave angustifolia Haw. in flower

Bulbels and seed capsules on *Agave angustifolia* Haw.

Agave fourcroydes Lem. in flower.

Close-up of same plant showing bulbels on infloresence

mercial types cultivated in various sub-tropical countries for the production of fibre. Both species are native to the peninsula of Yucatan.

The specimen illustrated was planted in 1926 and flowered during August and September, 1937, set only a few seed capsules, but produced 395 bulbels which clung to the inflorescence for practically a whole year, the first ones dropping off in July, 1938. Some of the bulbels attained considerable size, larger in fact than any heretofore noticed on any specimen of either *Agave* or *Furcraea*. Some of the largest of these bulbels measured 15 inches in length and had as many as 8 complete leaves attached to their bulbous base which measured 1¾ inches in diameter; their average size was slightly less than one inch.

This shaft was cut down on August 15th, 1938, for examination. About one-third of the bulbels had dropped to the ground at that date. In most cases single bulbels had formed, but a few twins were found growing in the fashion of twin flowers.

Besides its commercial importance in the production of fibre, this species is ornamental and differs from most large Agaves inasmuch as the leaves are rather narrow and straight, in contrast with the wider, more graceful, arching leaves of so many of the larger types.

Agave angustifolia Haw. forms a short trunk and reaches a height of 3½ feet, to the top of the leaves, and a diameter of about 5 feet. It carries over 150 straight, fairly stiff, fibrous leaves, pointing in all directions, from 2½ to 3 feet long, by about 3½ inches broad at the widest part, tapering from there to a stout end spine, about one-half inch long. The margins are armed with small, black tipped, hooked spines, pointing upward. It is one of the medium-sized Agaves of great ornamental value, and produces its shaft and inflorescence at an age of from eight to ten years. It propagates itself by seed, bulbels and side shoots, and can withstand considerable cold, at least was not injured by 12 degrees of frost. The original plant was set out in 1928, the illustration represents one of three side shoots attached to the base of the old stem, two of which flowered this year. Shaft is 5 feet 7 inches and the inflorescence 7 feet 2 inches, making the total length 12 feet 9 inches. The flowering period was July and August, 1938, when it produced 9,133 flowers and set 764 seed capsules with an average of 21 seeds per capsule (based on an examination of 30 capsules) therefore over 16,000 seeds were produced as well as 684 bulbels.

Twin bulbels of *Agave fourcroydes* Lem.

The Botanical Society of South Africa
P. O. Box 267, Cape Town

APPEAL FOR NEW MEMBERS

The Society is again making every effort to increase its membership in order to supplement the funds needed for the development of the National Botanical Gardens, knowing that it can thus best of all assist in this truly national work.

All Members and Associates have the privilege of participating in the distribution of surplus seeds from Kirstenbosch. The number of packets of seeds obtainable annually is as follows:

Family Members: 30 packets.
Ordinary Members: 20 packets.
Associates: 5 packets.

Members (but not Associates) who subscribe also to the support of the Karoo Garden, Whitehill, have the additional privilege of receiving 10 packets of seed annually from Whitehill.

A list of seeds available from Kirstenbosch and Whitehill is sent to Members and Associates annually. Application for seeds should be made to the Director, National Botanic Gardens, Kirstenbosch, C. P.

The Journal of the Botanical Society, published annually, is sent free to Members and Associates.

TERMS OF MEMBERSHIP

(a) Ordinary Member, subscribing not less than£1-1s. per annum.
(b) Family Member, subscribing not less than £2-2s. per annum.
(d) Life Member, subscribing not less than £25.

OBJECTS

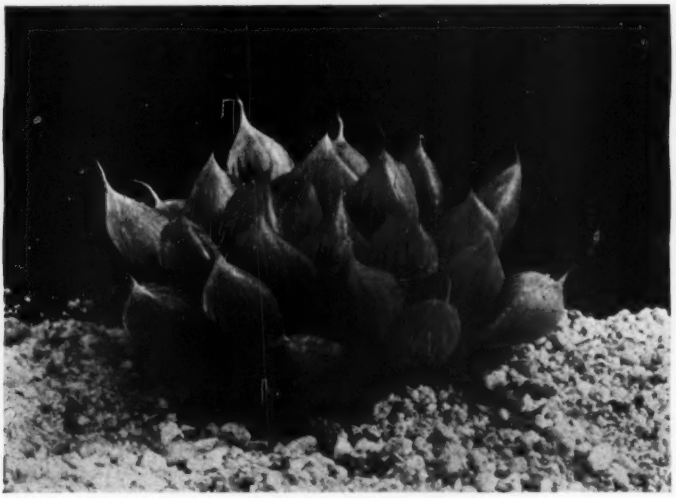
(a) To encourage the inhabitants of South Africa to take an active part in the progress and development of the National Botanic Gardens, Kirstenbosch, and the Karoo Garden, Whitehill, and to induce them to appreciate their responsibilities therein.
(b) To augment the Government grants towards developing, improving and maintaining fully equipped botanical gardens, laboratories, experimental gardens, etc., at Kirstenbosch and Whitehill.
(c) To organize shows at which may be displayed the results of botanical experiments or cultural skill in improving the different varieties of South African flora.
(d) To enlighten and instruct the members on botanical subjects by means of meetings, lectures, and conferences, and by the distribution of literature.

EDITOR'S NOTE: *South Africa is doing a constructive work and sets an example for our own country. How many botanical gardens are maintained outside of private institutions in the U. S.? The time will come when the American public will see the futility of this endless chase at the rainbow's end and will then pause to enjoy the beauty of growing things. Every city could be a garden-spot with its own native garden and conservatory for the enjoyment of exotic plants.*

SUNSHINE TO SPARE

Your kind question about partial shade led me to try full sun, but the burning which results shows that here in Florida we must endure less bloom for the health of the plants. This does not apply to Cactus probably. I have only the heavy strong big varieties, mostly native, as yet, and these, of course, in open ground. But Echeveria, and its relatives, which are my favorites, will not stand the summer sun, possibly because of our very heavy dew, and consequent steaminess in the early morning. In winter, the slant of the sun gives my south side sunshine about all day. I shall know more about blooms when my plants are older. They are in the main only yearlings as yet.

MRS. H. C. DORNE.



Haworthia pilifera Bak. nat. size

Notes on Haworthias

By J. R. BROWN

Haworthia pilifera, Bak. in Saund. Ref. Bot. IV (1870) t. 234, in Fl. Cap. VI (1896) 353; Berger in Pflanzenreich IV. 38. (1908) 107; Poelln. in Repert. Sp. Nov. XXVII (1929) 138.

Plant 5-6 cm. in diam. with 20-30 short and densely crowded leaves. Leaves 2-2.5 cm. long, oblong, erect, the oldest leaves spreading, pale green, the upper third pellucid and with 7-9 green vertical lines, the upper part of leaves especially on the back very turgid, the apex abruptly acuminate and ending in a toothed, pellucid, hairlike bristle, the margins and keel with short pellucid, ciliate teeth. Peduncle simple, includ. the raceme about 30 cm. tall; flowers more or less sessile; the deltoid bracts about 5 cm. long; perianth about 18 mm. long, the obtuse, green lined, recurved segments about half the length of the tube.

Introduced to cultivation by Cooper in 1860.

Locality: Type locality unknown. Received at Kew from Kingwilliamstown in 1883 and also recorded from Bathurst, Albany.

The plant of *Haworthia pilifera* Bak. which illustrates this sp. shows very well the somewhat abrupt line of separation between the pellucid tips and the chlorophyll bearing area of the leaves, which characterizes most of the spp. of the sect. *Limpidae* Berger. This plant was closely drawn into the soil so that only little more than the windowed tips were to be seen and was raised up so that more of the plant could be photographed. It was also in a very turgid state as the time was early in the growing period, when more or less dormant the leaves are thinner and almost flat on the faces. Only during the growing period may the older leaves be called spreading, as, due to the habit of withdrawing into the soil, which the Haworthias of this sect. have, the leaves are erect and if dry conditions long continue they become flaccid and incurving and the windowed tips become dull.

The plant shown was about 6.5 cm. in diam. Leaves 2-2.5 cm. long, 7-10 mm. in thickness towards the apex, 10-16 mm. wide narrowing slightly to the base, most of the pellucid tips showed 9 longer and shorter lines on the faces. The average of several plants showed 23 leaves.

When growing well, *Haworthia pilifera* Bak. is one of the finest of that group of interesting South African succulents known as "windowed plants."

Missing two copies of the "Journal" has been like losing rare specimens from a collection.

REGINALD L. HORNER, Sydney, Australia.

I am going over back numbers of the "Journal" again and again with profit and look forward to the cumulative index.

ROBERT H. WALKER, Elverson, Pa.

The author in his "Exotic Gardens" showing the legitimate use of bottles—for growing cacti. Illustration from "Cacti for the Amateur" by Haselton.

Bottles as Miniature Glass Houses

By E. C. HUMMEL

The idea of using bottles, with bottoms removed, for miniature glass houses, did not originate with us, but our mothers and grandmothers before us used them for starting cuttings of their favorite plants. They were usually used for a short time only and were discarded until further desired. In our gardens we find them useful the year around and we have had many inquiries concerning them.

They are more often employed by us in the open garden than otherwise. When plants are newly set out they help them to establish more readily. On account of both scion and stock growing more rapidly in humid air we often use them on newly grafted plants. Discretion must be practiced so that the top of the plant is not too near the glass. A light film of paint or white wash should be applied to the upper part of the bottle, especially over the shoulder to eliminate the danger of burns being caused by the sun focusing through the glass on the plant. Under such perfect growing conditions as exist under the bottle, weeds often thrive and some types will entirely fill a bottle before the gardener realizes their existence.

There are many advantages of these bottle glass houses. They protect tender plants from excessive sun in summer and have proven life savers during an unexpected cold snap when all available bottles were pressed into service with the result that many choice plants went through without damage. Insects, no doubt one of greatest detriments to the enthusiasm of collectors, usually may be kept on the outside. This, of course, is only true when the plant is entirely free from pests when the bottle is put in place. As the heat inside these bottles is many degrees higher than that on the outside it is necessary to have some ventilation. Otherwise the moisture expelled from the soil and plant would soon be converted into steam and scald the plant. We find coarse cheese cloth tied over the top will allow air exchange and yet give sufficient protection against the entrance of insects. Mealy bug, especially, like the conditions present and a few will soon become an entire colony if close watch is not kept. The bottles are also helpful to humidify the air, retain soil moisture and protect plants from grime and smoke. However, as osmotic action is greater within the plant naturally liberal quantities of water are necessary to replace evaporation.

While special grooming for show plants is not generally looked upon with favor, some very interesting experiments have been made on the use of these bottles for protection a few weeks prior to exhibiting. Results are especially favorable with *Mammillaria plumosa, M. bocasana, Cephalocereus senilis* or other hairy *Cereus,* etc. One of the most interesting subjects is *Lophophora williamsii* which, when placed under a bottle soon develops long cream colored wool in each areole. This wool is always present in a lesser degree, but does not have proper conditions to develop in such quality or quantity. By brushing the hair often with a soft toothbrush you can develop a plant within a few weeks that would not be recognized as the original.

Perhaps you have noticed that in the spring of the year, grass tips may be red, the reason for which we assume to be to trap the red rays of the sun. The red is gradually replaced by a bluish tinge and later passes into green and later ashen grey. We have considered it worth while to experiment with the different colored bottles to study the effect of exclusion of different rays. Our experiments are far from complete, but we have found them interesting enough that we suggest others would find them worthy of consideration. Light filters applied to plants is very similar to light in relationship to photochemistry. As plants suffer from certain light deficiencies when shaded by certain colored bottles we suggest close study and changing of bottles.

Too little light results in elongated cells or attenuation. Under slightly reduced light, cells will exaggerate to many times their normal size to enable them to obtain the necessary vital rays. If bottles of different colors are not available, sheets of colored celophane obtainable at ten cent stores could be used to cover the bottles. For experimental purposes the action obtained from only one test plant would be valueless but a number of plants of one species should be used with an equal number growing under natural conditions.

Pent-house glass gardens may also be made from these bottles. Procure a plate of sufficient size to act as a base and cover this to a depth of three-fourths of an inch with peat moss. Treat the desired seed with powdered "Semesan." Moisten the peat moss with boiled water in which a commercial plant tablet has been dissolved. Sprinkle lightly with sterilized peat moss and cover with the jug. It is very necessary that all materials used be sterilized as the conditions are ideal for the growth of algae, etc. Keep the moss well moistened with boiled water.

Except in cases where experiments are being made, we suggest clear bottles. To remove the bottom choose a cool morning without a breeze. The bottle should be as near the same temperature on all sides as possible. Place the top of the bottle in a can sufficiently large to hold it steady with the part you wish removed uppermost. Saturate a piece of softly woven twine in kerosene and tie tightly around the bottle where you desire the cut. The distance from the bottom depends on the thickness of the bottle at the curve. Ignite by running a lighted match around the string, being certain that it is burning all the way around. If after thirty seconds or so no crack has been seen or heard, take the bottle by the neck and dip quickly into cold water. On account of the difference in thickness of parts of a bottle they do not always break exactly square. In case the cut is unsatisfactory we suggest another bottle be used as it is very difficult to remedy a bad cut. The edges should be sandpapered until smooth.

Easterners often ask "when is the proper time for setting our cactus in the open garden?" The Indians told the white settlers to plant their corn when the leaves of the oak were the size of mouse ears. This may be used as a sign in the case of cactus plants if the fancier has sufficient bottles to cover them. Where plants of different sizes are set out naturally you will have to have a variety of sizes in your bottles. Anything from a quart bottle to a five gallon jug has been found useful.

In Southern California many an amateur financially unable to build a glass house has been able to raise some of the rarest plants in this manner. Discarded egg hatching incubators with the solid top removed and replaced by glass has also proven very satisfactory since the desired temperature and humidity can be maintained and it is possible to grow even the tenderest cactus for the first two years. In fact the lack of sufficient funds to build a large glass house need not hinder any one from having glass protection for their plants, as very efficient miniature glass houses have been built from old auto glass or discarded window lights.

"THE STAPELIEAE" TOO

We are delighted with "The Stapelieae," both as a book for our collection and for its fascinating contents. We have several specimens in our collection and there is at the moment a "Gigantea" in bloom in a friend's collection which is causing a bit of local interest!

I. O. DIMOCK, Canada.

Of course I want to renew my subscription—in spite of the fact that reading about the cactus meetings and field trips makes me green with envy!

MILDRED D. BRADBERRY, N. J.

CAPITAL LETTERS IN SPECIFIC NAMES

By ALAIN WHITE

Following the example set by Dr. N. L. Britton and Dr. Rose in their classic work, *The Cactaceae,* it has hitherto been the policy of the *Journal* to maintain a uniform style for the specific names of plants by beginning the name with a small or "lower case" initial letter.

This policy runs counter to Recommendation XLIII of the *International Rules of Botanical Nomenclature,* Cambridge, 1930, which reads: "Specific epithets should be written with a small initial letter, except those which are derived from names of persons (substantives or adjectives) or are taken from generic names (substantives or adjectives)".

From time to time, contributors to the *Journal* have taken exception to its policy and have urged the Editor to change over to the capitalization of personal and generic specific names. In particular this view was ably set forth by Dr. R. W. Poindexter and Dr. Ira Wiggins in an article, *Latin Plant Names,* in the *Journal,* 8:205, 1937.

In order to ascertain how far its policy was supported by the public opinion of the day, the Editor of the *Journal* recently invited views from the following: Dr. R. W. Poindexter; Frank F. Bunker, Carnegie Institution of Washington; R. H. Peebles, U. S. Dept. of Agriculture, Sacaton, Arizona; Curt Backeberg, Volksdorf, Germany; R. S. Woods, Azusa, California; Jo Coffin, U. S. Government Printing Office, Washington; and Jack Whitehead of the Botanical Garden of the University of California.

Of these, the first three expressed their opinion in favor of accepting the Recommendation of the Botanical Congress for the capitalizing of personal and generic specific names; while the last three expressed themselves as favoring the writing of all specific names with small initials. Herr Backeberg, the only representative of a foreign country, favored the use of small initials in all cases, providing the matter is brought before the next meeting of the Botanical Congress, in 1940. "I follow your opinion," says Herr Backeberg, "that here should be *uniformity.*"

The opinions being so evenly divided, the Editor of the *Journal* has asked me to summarize the arguments PRO and CON. Both sides follow Herr Backeberg in stressing the importance of uniformity, but they approach the other factors involved from different points of view. The gist of each of the arguments presented appears in the words italicized.

I. Let us begin with the arguments in support of the Recommendation:

PRO-1. Dr. Poindexter, Mr. Peebles and Mr. Bunker all agree that the Recommendation should be followed, as a step towards attaining uniformity in botanical literature. Quoting Mr. Bunker: "Until recently our practice was to use the lower case initial in printing personal and generic specific names. More recently, however, an attempt has been made by representative organizations to harmonize practice in respect to nomenclature. In consequence we have modified our policy to this extent, that is we are willing *to follow the practice that expresses the considered judgments of a representative body* of workers in this field."

The argument of Mr. Bunker is perhaps the most convincing one advanced on either side of the discussion. For where a representative body of workers, such as compose the membership of the Botanical Congress, is striving to bring harmony of practice into the whole complicated field of nomenclature, surely those who differ on points of detail should be willing to subordinate their individual views. Otherwise, there are sure to be some dissenting opinions on almost all the rules and recommendations involved, and no real progress towards uniformity will ever result. Is it not wiser for each to yield a little, in the hope of achieving complete uniformity of procedure under the direction of the Congress?

PRO-2. The Editor of the *Journal* has contributed the following, quoted from that excellent treatise, *How Plants Get Their Names,* by L. H. Bailey: "Some writers prefer to use no capitals in specific names, not even in those commemorating persons. . . . This is in the interest of uniformity, which is the fetish of standardization and has no supernatural merit. It is much more desirable *to maintain dignity and emphasis* than to insist on the flatness of regularity. Suggestion of much precious history is lost when the identifying capitals are deposed."

II. Turning to the advocates of small initials for all specific names, we find the arguments presented at greater length, especially in a very complete and thorough analysis by Jack Whitehead, which unfortunately the restrictions of space prevent quoting in full.

CON-1. The strongest argument for the use of small letters for all specific names is succinctly set forth by R. S. Woods, who says: "Your policy in this respect is very welcome to me, as it certainly makes for uniformity and regularity, and *it agrees with zoological practice.*" This point, of trying to achieve uniformity between Botany and Zoology through the use of small initials, is stressed by each of the contributors who oppose the recommendation of the Botanical Congress. Jack Whitehead writes: "The botanist has little excuse for trying to impose an arbitrary ruling in favor of the capitals. The zoological Strickland Code was adopted in 1842; the botanical Paris Code in 1867. Zoologists have described 840,000 species of animals; the botanists only 240,000 species of plants." And he adds: "Frederick Law Olmsted, noted landscape architect, Harlan P. Kelsey, famed horticulturist, and Dr. Frederick V. Coville, great botanist and late Curator of the U. S. National Herbarium, writing as the American Joint Committee on Horticultural Nomenclature in the introduction to the now generally accepted *Standard Plant Names,* make this comment: " . . . to use no capitals in scientific names, except invariably to begin the generic names with a capital. This is a practice which some botanists and some horticulturalists have long followed and which is universally followed by American zoologists.' And the *Garden Dictionary* (edited by the noted botanist, Norman Taylor, 1936) remarks: 'The editor has followed the practice long in use by zoologists and geneticists and adopted in part by the second edition of Webster's *International Dictionary* in two departures from conventional rules—one being the elimination of all capitals from specific names, whether based upon geographical adjectives, proper names, or generic names'."

CON-2. The use of small initials for all specific names is desirable in that *it affords an immediate way to distinguish them from all generic names.* Thus Jo Coffin expresses the view of the U. S. Government Printing Office: "The name of a phylum, class, order, family or genus is capitalized; that of a species is not capitalized, even though derived from a proper name. This refers to the practice of this Office in printing the

1920 edition of a scientific work on botany. This custom has been adopted by many modern scientists, apparently for ease in differentiating between the several division in the fields of flora and fauna alike."

CON-3. The Editor of the *Journal* draws attention to the arguments adduced by C. X. Furtado in his article, *A Commentary on the Laws of Botanical Nomenclature in the Gardens' Bulletin,* Straits Settlements, Oct., 1937. "At first the recommendation seems very simple; yet on a closer examination it will be found that, *besides being very illogical, it is also extremely difficult to follow.*" Mr. Furtado cites many concrete examples of the difficulties in determining what specific names are to be regarded as of strictly generic or personal origin within the meaning of the Recommendation. Here is just one quotation: "Then a doubt arises whether such names as *Princei, Connaughtii,* etc., should be spelt with a capital when they are taken not from personal names, but from titles, e.g. Prince Albert, Duke of Connaught, etc. Further why should the supporters of the Recommendation not begin with a capital such names as *van-Steenisii, van-Houtteana, von-Muelleri,* etc.; and again why include a capital in the middle of such names as *MacArthurii, MacDonaldiana,* etc? Under the recommendation, *Vansteenisii, Von-muelleri, Macdonaldiana,* etc., (with or without the middle dashes) should be the correct Latinized epithets."

CON-4. A final argument against the use of the capital initials originates in a point of view opposite to that presented above as PRO-2. Jack Whitehead explains it this way: "About the only support the capitalization of personal specific plant names can claim is that of literary usage. This, however, is not usually anything that the scientist worries about. He is not often a literary man and his greatest object in publication is to make himself concisely and clearly understood. He is likely to think of a system of nomenclature in terms of uniformity and simplicity rather than of good literary usage. Botanical terms when used in specific plant description are usually easily understood by scientists, and the layman need have little difficulty with them if he have on hand a good Latin dictionary. But a scientist or layman is not going to be able to make any more out of such specific names as *Schickendantzii* or *Mueblenpfortii* by the botanist giving them an initial capital letter. Such names generally have little meaning to the student and few dictionaries will explain them. On the whole the practice of using personal names in describing plants is a most objectionable one. Far too often new species are named in honor of men without anything to recommend them other than some slight renown, and the botanist so naming new plants should be severely censured. *Plant names should describe the plants* to students all over the world, *and where a botanist does decide to name a plant in honor of a friend he should not emphasize the practice by the capitalization of the name.*"

And now, after hearing the PROS and CONS as submitted by its contributors, how is the *Journal* to react to them? That is, after all, the principal question at issue.

At first glance it would appear that the proper thing to do is to fall in step with any decision promulgated by the Botanical Congresses, even where it runs counter to one's individual views. Yet, where opposing arguments can be presented as strong as those quoted, there may be another side of the question.

In this case no final Rule is involved; only a Recommendation. And even if a Rule were at issue, the support of popular opinion should be behind it. That was the original spirit of the International Rules. Jack Whitehead points this out in his letter, quoting Article 2 of the original Paris Code of 1867. It reads: "The rules of nomenclature should be neither arbitrary nor imposed by authority. They must be founded on considerations clear and forcible enough for everyone to comprehend and be disposed to accept." And in the present Rules, Article 2, we read: "The Recommendations deal with subsidiary points, their object being to bring about greater uniformity and clearness in future nomenclature."

To the *Journal,* the Recommendation under discussion does not seem clear enough for everyone to comprehend nor forcible enough for everyone to be disposed to accept: it does not seem to make for greater uniformity in any way. Zoologists do not accept it; 50% of the correspondents quoted above do not do so. Should there not be opportunity for the next Congress to reconsider the Regulation, and either to clarify it or else to reverse it? The *Journal* would like to wait and see if this may not be possible. Meanwhile the *Journal* feels it not improper to continue using the small initials for all specific names in its pages. Yet its pages will not be closed, assuredly, to those having other convictions and a technical point of style will never be used as an issue to discourage that which the *Journal* was established to promote.

Let the *Journal* strive for clarity and uniformity, and advocate measures which it believes trend in their direction, without, however, insisting on an arbitrary ruling of its own. And let its readers and contributors write in freely in expression of their own views.

Summary of the value of Hortomone A in rooting succulents

From *Cactussen en Vetplanten* October, 1938

1. As many species of succulent plants are known to be propagated very difficult by cuttings, due to insufficient root formation, the Dutch Society of Cactus Amateurs (Sect. Amsterdam) carried out experiments with Hortomone A., during June, 1938, to prove its value for the rooting of succulent plants.

2. Cuttings of 32 species, of both cactus and succulents of other groups, were treated with this growsubstance and in the same time control series were placed without treatment.

3. As never before experiments are undertaken with succulent plants one was quite uncertain about the best solution and time of the treatment.

4. The available material was arranged in four groups: Group I: 18 hours 1/320 Hortomone; Group II: 15 hours, 1/320 Hortomone; Group III: 18 hours, 1/500 Hortomone and Group IV: 15 hours, 1/500 Hortomone.

5. The percentage of marked stimulation by H. in the various groups are: 68%, 69%, 71.5% and 29%.

Group I. In these experiments some cuttings were slightly damaged by the solution and in one cutting of *Trichocereus spachianus* the treatment caused only callus formation.

Group II. Many positive results were obtained in this section.

Group III. This treatment induced profuse rooting in many cases and especially in Euphorbia and Stapelia more and stronger roots were developed.

Group IV. Few positive results were obtained.

6. As marked acceleration and more profuse rooting resulted from these experiments, Hortomone A. may be recommended to cactus growers, but further experiments have to be done to determine the most advantageous treatment for any special variety.

J. A. J.

Echinopsis eyriesii. Courtesy Desert Magazine, El Centro, Calif.

ECHINOPSIS

Am specializing in Echinopsis and perhaps you can give me an idea of some other cactus which would grow and bloom in the northern section of California. The climate is not like that in southern California in that we have much longer cold spells. I hope that my Echinopsis will bloom. If you do not think they will, I would appreciate word to that effect.

I have my beds for Echinopsis ready with southerly exposure and have a fine mixture of one third sandy loam, one third leaf loam, one third manure and about three shovels of peat moss with good drainage. Is this as desirable as any mixture that you know of?

G. A. SHAVER, Napa, Calif.

Your soil preparation seems to be very good for *Echinopsis* except that peat should be used very sparingly if at all, as peat is valuable only as a kind of sponge to hold water and this is not desirable for cacti. The manure should be well decomposed and worked well into the soil.

The element of partial shade has not been mentioned by you, but this is desirable for a number of species of *Echinopsis* such as *E. huottii, E. calochlora, E. fiebrigii,* and *E. minuana.* These seem to require some shade, otherwise they become yellow and sun burned.

Propagation by offsets is very successful with Echinopsis as thereby you have true species providing your first parent plant is true, while propagation by seed is liable to result in hybrid plants as was so ably explained by Mr. Hummel in his article on Echinopsis in Volume VI of the JOURNAL, pages 166-167.

In connection with Echinopsis, the closely related genera *Trichocereus* and *Lobivia* should be considered as they all intergrade, *Lobivia* approaching *Echinopsis* through species like *L. aurea, L. formosa,* both of which were formerly considered as *Echinopsis* although both are day flowers while *Echinopsis* are distinctly night bloomers. Echinopsis again closely approaches *Trichocereus* through *Echinopsis* (Acanthocalycium) *spinaflora, E. chionanthus* and *Trichocereus candicans,* both genera being night bloomers. *Lobivia hauscha,* just transferred by me from *Trichocereus* forms a further link connecting these three genera. Most *Echinopsis* seem to be very frost resistant, *E. multiplex, E. oxygona, E.*

turbinata and others withstanding winters outdoors in Canada. Dr. Poindexter, in his article on Frost Resistance, JOURNAL, Vol. VIII, page 155, states that of his very large collection of *Echinopsis* only *E. bridgesii, E. misleyi, E. huottii* and *E. calochlora* were observed to be tender.

The majority of kinds of *Echinopsis* available in the United States are *hybrids* and I believe the following to constitute a complete list of *true species* in that genus:

E. albispinosa.
E. ancistrophora.
E. baldiana.
E. bridgesii.
E. calochlora.
E. campylacantha.
E. chionantha.
E. cordobensis.
E. eyriesii.
E. ferox.
E. grandiflora.
E. hamatacantha.
E. huottii.
E. hyalacantha.
E. intricatissima.
E. klimpeliana.
E. kratochviliana.
E. leucantha.
E. leucorhodantha.
E. lobivioides.
E. longispina.
E. mamillosa.
E. meyeri.
E. minuana.
E. mirabilis.
E. molesta.
E. multiplex.
E. nigra.
E. obrepanda.
E. oreopogon.
E. oxygona.
E. pelecyrhachis.
E. polyancistra.
E. potosina.
E. putscheriana.
E. rhodotricha.
E. shaferi.
E. silvestrii.
E. smrziana.
E. spegazziniana.
E. spiniflora.
E. thionanthus.
E. tubiflora.
E. turbinata.
E. violacea.

W. TAYLOR MARSHALL.

ENJOY YOUR CACTUS

Look out for the Gypsy in you while you wander in to the adventures that await you when you start a cactus collection. There are only a few rules to follow when you start collecting, the others you make to suit yourself.

First of all, learn the names of the three tribes of cacti:

1—Pereskieae: Not so hard is it? "Leaves broad, flat; glochids" (those little patches of velvety looking but nasty stickery) "wanting; flowers stalked (sometimes short stalked), often clustered." Doesn't sound much like a cactus, does it? It is, though.

2—Opuntieae: Not any harder, is it? "Leaves (except in *Pereskiopsis*) usually small, often wanting on the vegetative parts. Areoles (places for glochids) with glochids (except in *Maihuenia*); vegetative parts bearing leaves, which are usually small and fugacious." "This tribe contains 7 genera and at least 300 species." There are two main types of plants to remember here; the platyopuntia (pad type) and the (cylindrical) cylindriopuntia.

3—Cereeae: That is easy, isn't it? But just wait. This is where your troubles start. This is where you will want all the reading matter and pictures you can get. Everything from an *Areocarpus* (Living Rock) and the *Mammillarias* (nipple plants) to the giants that grow to 40 feet and weigh 5 tons. Little *Lobivias* that grow in the mountains of Bolivia (name of plant is an anagram of Bolivia) and the *Epiphyllums* that grow in the forks of trees along with those beautiful flowered orchids of the tropics, and the climbing *Hylocereus* (one of the Night Blooming Cereus). The *Ferocactus* (barrels); *Cephalocereus senilis* (Old Man); *Astrophytum* (Bishop's Cap); *Chamaerocereus* (Peanut); *Aporocactus* (Rat Tail); *Echinocereus rigidissimus* (Rainbow) and hundreds of others. Don't let those names scare you or you will lose a lot of fun before you start.

Join a club and see how soon you "get the hang of it." There is always some one to give you the name of that particular plant and they may not know much more about it than you do, but they do know how to pronounce the name and that *is* something. Oh, you will learn and learn fast if you make it your hobby and ride it.

Then start your collection, if you haven't already. And when you read, hear of or see a new or clever idea of a cactus or other succulent collection that "clicks" with you as having possibilities of a novel collection that *you* would like to own, don't just put the idea aside and dream about it; DO SOMETHING ABOUT IT! What ever it is, break down and let your impulse lead the way. Cultivate those embryo ideas that your dignity or some other such element of your inner self has never allowed to see the light of day, and you will be surprised at the things that an impulse can do for, and to you. The Gypsy in you will show itself and you will travel from one adventure to another, roaming up and down these Americas (the cactus is an American plant you know, like the sweet potato, tomato, Irish potato, corn, tobacco, etc), and you enjoy yourself in a way you did not think possible.

CHAS. R. COLE, Cincinnati, O.

I have today received the four volumes of Britton and Rose and I most sincerely congratulate you on a magnificent production.

H. N. MINCHIN, England.

SUCCULENTS—By van Laren. 140 imported pictures in natural color that enables you to correctly name your succulents other than cacti. Descriptions of the genera and cultural information written for the amateur. Artistically bound in Art linen. First editions $10.00. Second Edition $7.50.

MESEMBRIANTHEMEN UND PORTULACACEEN by A. Berger. $3.00.

STAPELIEEN UND KLEINIEN (German) by A. Berger. $3.00.

WASHINGTON CACTUS AND SUCCULENT SOCIETY—November 14, 1938

MRS. H. H. LEWIS, Seattle

Phylis Oakley was elected vice-president at our October meeting. Harriet Jones of Buckley, who held this position was killed in an automobile accident in September. Miss Jones was a very popular and capable member of she will be greatly missed.

Dr. and Mrs. Lill have another very interesting hobby. They spend their week-ends with a group of minerologists, visiting sections of the state where there are valuable or interesting rock formations. They have a complete set of cutting and polishing tools.

Our president, Mr. Bert Ewing, writes poetry when he is not working with his plants. He will be the next member to display a greenhouse to us.

Adele Lewis has not solved the heating problem for her new one yet.

We are proud to have Frieda Gorgen for a member. She holds an office in the State Wide Garden Clubs, and is a parlimentarian. She is going to be a great help to us.

In a recent JOURNAL you discussed mealy bugs. Perhaps you will be interested in my treatment for them. Not that I have gotten them under control, but I can certainly tell others a lot of things that won't work. Several years ago, just about the time that my collection was really beginning to grow, I plunged the pots in a bed out in the open. Mealy bugs are not a garden pest here so it never occurred to me that they might be on the roots until I began to realize that some of my plants were not doing as well as they should. By the time I was ready to transplant some of them, the root mealy was rapidly spreading through my collection. The Epiphytes were so badly infested that I cut the roots off and rerooted them. Had I realized how difficult they are to get rid of, I should have done the same thing to all of my plants. Today the Epiphytes are bugless.

I have washed the roots off and soaked them in various spray solutions and used soil fumigants without any great success. Always there were a few that escaped, just enough to start an infestation the following year. Of course, being in boxes didn't help much. It just gave the bugs more freedom. A year ago I bought a quart of rhotenone-pyrethum spray material and the plants that were treated with it a year ago are still free of bugs, but the ones that have been treated this year developed more bugs in less than two months which leads me to believe that this brand of spray deteriorates. I went through my entire collection in July, washing the roots, soaking them in spray, gave them fresh soil and sterilized the boxes. In October I went through the collection again and about one plant in seven or eight still had a few bugs. So I have again given them fresh soil and put them in individual pots. Where there was even a suspicion of a bug, I cut the roots off. Some were treated as cuttings if the body of the plant wrinkled down over the roots in such a way that the bugs might find hiding places in them.

If this treatment does not work, I fear that I shall have to cut down on my collection, as my plants are increasing in size each year and it is becoming more difficult to handle them. As you know, my plants are all in the house where it is not hard to watch them, and I am able to control the top pests without any great amount of work. Growers suggest that ants might be the carriers, but ants are not a problem here and we do not have the mealy bug in our gardens, so it is obvious that they are brought into our collections by plants that are already infested.

From my experience, I realize that many fine collections are given up because the battle with the mealy bug is too great, and for goodness sake, if anyone has found any method of getting rid of them, I hope they will pass it on to us amateurs. Naturally, I hesitate to add any more plants to my collection, much as I would like to. Cannot someone tell us something about them? Do they ever develop any other form of life?

COMMENTS FROM TEXAS

In the last two issues of the JOURNAL you have commented upon the lack of interest in cacti in Texas. I believe the reason is simple—in this part of Texas, at least, cacti are weeds, and one doesn't ordinarily plant weeds in one's garden. For example, the heavily armed *Homalocephala texensis* is called by the natives "Manco caballo"—the "horse crippler"—and the cowboys uproot them whenever they find them.

There is one question I should like to ask—are Fulton's Plantabbs suitable for use on potted cacti?

Incidentally, I am inclined to agree with Dr. Poindexter on the sulphur question. While sulphur inhibits the growth of bacteria and fungi, thus preventing rot, I rather doubt if it has any value in promoting healing.

JOHN W. SKINNER, Midland, Texas.

EDITOR'S NOTE: Mr. Skinner is one of the three Society members who answered the Editor's heart rendering plea for correspondence from our members. Won't you please refer to page 72 in the November issue and then jot down your experiences? Your notes need not be typewritten. Take a part in your JOURNAL.

FROM WARRENTON, MISSOURI

Enclosed is my renewal to the "Cactus and Succulent Journal." I wouldn't be without it and only wish that I had learned of it before I did.

The article that I have enjoyed most of all was "Ariocarpus" by Marjorie Lee. Can't someone write another article like this only on a different genus? It would be very helpful to the beginner to acquaint him with the different genera of cactus in the same way that Marjorie Lee did with the genus "Ariocarpus." Articles like these would also help the amateur to name his plants correctly. This is my biggest problem at present. A number of my plants were purchased some years ago unlabeled, and it is very hard for an amateur to learn their names.

JAMES GERDEMANN.

FROM INDIANA

So many in the Middle West are getting interested in growing Cacti in the house. I have always liked them, I guess. When I was a small child fifty years ago, I remember my mother had some large cacti, so know she loved them, too.

Every few days I am asked to pronounce names of certain species so I feel that another need of the amateur is a small pronouncing dictionary, similar to the one published by Better Homes and Garden, 50c; and The Florist Review, 25c, of plant names and flowers. Am very sorry we members of the Middle West cannot attend any of the meetings of the Society.

MRS. A. B. MARTIN.

EDITOR'S NOTE: We hope that the "Illustrated Glossary" now being printed in the JOURNAL will solve this need. These sections are printed in the center of the magazine so that they may be removed later for binding. As you use the Glossary please send in any omissions so that we can keep the Glossary up to date. Mr. Hummel and Mr. Walther are the only members who have sent in suggestions. *Glossary continued Jan.*

ANSWERS WANTED

May I also avail myself of your answer department? On some of my cereus, I find a small slate blue bug, very active.

What is the remedy? Also a *Mammillaria* occasionally exudes white stickly fluid. Is this a sign of decay, or poor culture?

FRANCES LEBER, N. J.

Member Jay E. Gilkey of the Cactus and Succulent Society of Oklahoma and his *Cephalocereus alensis* which he won for having received the highest number of points at a recent State Flower Show. Try to get this plant from the proud possessor!

FROM TEXAS

Your editorial in the November issue of the JOURNAL is too inviting an opportunity to pass up—so here it is.

To begin, my interest in cacti dates back only a little over a year—to be exact, I was bitten by the cactus bug in October, 1937. During the fall, winter, and spring of 1937-38 I made rather extensive collections of native cacti, and I have a rather complete collection of west Texas species. My work as a geologist for an oil company took me frequently to the mountainous areas of Trans-Pecos, Texas, and as a result, I have nearly all of the species described from the area and several which have never appeared in the literature. I might say here that both individuals and species are much more numerous in the semi-arid mountains than in the desert.

Desert cactus faunas—at least in west Texas—run strongly to Opuntias. All of these were promptly planted outside in sandy soil regardless of season or weather conditions. Out of some 200 plants treated in this manner I lost only three—these were killed by termites last summer. We had an unusually wet winter and a hard freeze in early April after nearly two months of warm weather. All of the plants were growing, some had bloomed, and many were in bud at the time of this late freeze. The only damage to the natives was the nipping of buds which were nearly ready to open. All of these plants have withstood temperatures as low as 8° F.

How about this watering business—in your "Cacti for the Amateur" you make the statement (p. 4) "During the drought periods, the flowers seem even more profuse in the brave battle to perpetuate their kind." My experience suggests just the opposite. During the early months of spring we had plenty of rain and the plants grew rapidly and bloomed well. Then, during May and June, we had a period of heat and drought. During this time I watered my cacti only about once a week. Growth slowed down and almost stopped, and buds on many plants either blighted and dropped off or simply ceased growing. Finally, in July, we got a heavy rain. Within two days growth had begun again and continued so rapidly that in a week more new growth appeared than during the preceding month. Within ten days, buds which had shown no change in appearance for weeks, had doubled in size and started to open.

I took the hint and during the rest of the summer watered my cacti as heavily as any other plants. I was rewarded by a profusion of blooms. Incidentally, I have noticed absolutely no tendency to sunburn after sprinkling during the sunny part of the day.

Here is a partial list of natives that bloomed outside, without protection of any kind, the first season after being collected (dates are *first* blooming dates):

Neomammillaria denudata—March 4th.
Epithelantha micromeris—March 5th.
Neomammillaria meriacantha—March 18th.
Echinomastus sp.—March 21st.
Neomammillaria applanata—March 22nd.
Ferocactus uncinatus—March 29th.
Echinocereus chloranthus—April 3rd.
Homalocephala texensis—April 14th.
Lophophora williamsii—April 14th.
Echinocereus perbellus—April 22nd.
Thelocactus bicolor—April 22nd.
Escobaria dasyacantha—May 28th.
Echinocereus dasyacanthus—May 16th.
Coryphantha vivipara—June 14th.
Echinocactus horizonthalonius—June 16th.
Coryphantha echinus—July 2nd.
Ferocactus hamatacanthus—July 7th.
Brittonia davisii—July 8th.
Neolloydia texensis—July 8th.
Coryphantha macromeris—July 19th.
Ariocarpus fissuratus—September 3rd.

JOHN W. SKINNER.

FROM NEW HAMPSHIRE

I have tried growing cacti from seed for the past three years with very little success until I tried some seed and followed instructions of one of your advertisers, Mr. R. W. Kelly, CACTUS JOURNAL (Pg. 101, Jan., 1938). At present I have a nice batch of seedlings coming along nicely to encourage me to try growing all my plants from seed.

Thank you for all the consideration shown me during my trial subscription. I hope that, as time goes on, we may get to know each other better.

WALTER CHESZUN, N. H.

DIRECTIONS FOR REACHING F. SCHMOLL IN CADEREYTA, MEXICO

The Government is now building a connection to the Nogales-Guadalajara Road. The connection to our place is going over Huichapa, Querétaro. They are building, too, a connection with the Laredo-Mexico City Road, and I shall try to receive an exact map of the two roads and will send it later. Many people ask for the road to come to Cadereyta and a few have arrived, but every visitor is surprised about the wonderful plants he finds here.

FROM TRINIDAD B. W. I.

I have now been a "member in good standing" of the Society for some months and feel it is time to contribute some notes on my experiences in cultivating xerophytic plants in this part of the world.

I am the only member of the British Cactus & Succulent Society in the B. W. I., but do not know how I stand with you, as you do not publish a list of members. I look forward to the arrival of the JOURNAL with the greatest of eagerness and always derive a great amount of valuable information from it.

I started the cultivation of succulent plants about eighteen months ago,—came across an old, British seedsman's catalogue, which offered seeds of various cacti and decided to try some. As a result of my abysmal ignorance of the subject, I did not have much luck at the start, but some grew and I got intensely interested in the subject.

I started importing plants from California to supplement my seedlings and now have quite an imposing show, in spite of numerous failures. In this tropical country we have, of course, abundant heat and light and protection from our tremendous rainfall can be provided; unfortunately there is no way of overcoming atmospheric moisture and this, I think, has been responsible for the majority of my failures. Counting successes and failures, I must have had about 300 species of cacti in my possession, as well as a large number of other succulents. Of these latter, Stapeliads and Kalanchoes are my favorites,—Stapelias seem to do particularly well here, which is rather surprising; they seem to grow the year 'round and flower over a much longer period than in cooler climates. *S. cantabrigiensis* has been flowering with me constantly for over three months and still has buds developing. *S. schinzii* opened a flower for the first time this morning,—a truly gorgeous flower this, (if the scent could only be eliminated). *Huernia macrocarpa* x *penzigii* is another that has been flowering constantly for over three months. By next year I hope to have a really good collection of these interesting plants.

In the October issue of the JOURNAL, Mr. C. G. Hodgson mentions in his interesting article, speaking of *Bryophyllum tubiflorum* "when the plant has attained a foot or more in height it develops miniature plants on the points of the leaves." I have young plants, not yet two inches high, which have young plants on them. I hope eventually to produce a vegetable counterpart to the cast stated in those celebrated lines "Big fleas have little fleas upon their backs to bite 'em and little fleas have lesser fleas and so,—ad infinitum." If I ever get plantlets with microscopic counterparts upon them I will let you know.

While on the subject of Kalanchoes, I should like to say something about Dr. Houghton's hybrid of *K. tubiflorum* x *K. daigremontanum*. In May of this year I received five tiny plantlets of this from my good friend and fellow-member, Mr. Ralph L. McWilliams, of Florida. They came in an air-mail letter and arrived in perfect condition; all grew, but one has remained a dwarf about an inch high. The other four are now about 8 inches and have produced innumerable plantlets and I have about 300 planted off,—goodness knows how many the wind blew away,—I expect some day they will be recorded among the native flora of the district! The largest of their progeny are now about 2 inches high and already producing plantlets. It is a lovely thing and should prove a godsend to nurserymen. All honour to it's producer, the late Dr. Houghton.

I have tried a lot of the stemless *Mesembryanthemums*, but with not much success;—excess humidity, no doubt. Still I have succeeded with some *Faucarias*, *Lithops*, etc., and hope to always have a few in the collection.

I would like to submit lists of my favorite ten cacti and succulents, but cannot yet make up my mind. At present I am in the position of the gentleman in a restaurant who, having read right through a very lengthy bill of fare, said to the waiter "I vil haf all of dose." Maybe when my appetite is slaked a bit I will be able to make a choice.

I have just received a set of the second edition of "The Stapelieae,"—a truly marvelous work and one which I expect will be considerably thumb-marked by the time I have done with it,—i.e. when it comes my turn to be "planted."

H. MARTYN SKINNER, Sept. 11, 1938.

FROM FLORIDA

The nine volumes of the Cactus & Succulent Journal arrived in due season, *so*, ever since, I have been dead to the world of duty. Explains, but does not condone failure to promptly acknowledge receipt of books. The JOURNALS are wonderful, and "full value for the money," and have already answered many of the list of questions I have crying for answer.

Personally, I cannot get interested in cactus in general, being repelled, in my old age, by their exposition of "Life's endless toil and endeavor." The Crassulaceae have for me a more gracious appeal. The Echeveria being my favorites, and the "Notes" of Mr. Walther with the wonderful illustrations having whetted my appetite almost past waiting, I wish that you could tell me that there is some prospect of the complete monograph being published.

And something has occurred to me in connection with these series of "Notes" on the various groups as *Stapelieae, Echeveria, Haworthia, etc. As one object of* the Society is to awaken appreciation through knowledge, and all but those botanically minded being perforce in the kindergarten class at the start, would there be any use in a few lines to kindergartners (like myself) immediately preceding a series of "Notes."

For instance about Haworthia, meaning of "pearled" and "windowed." Short description of original homes and cultural requirements in detail. Desirable and easiest grown species easily obtainable. For what class of culture suitable (pot, garden, hothouse, florist). Why these are or are not suitable plants for beginners' collections, in north, south, east, seaside, etc. And doubtless many other points of which I am ignorant.

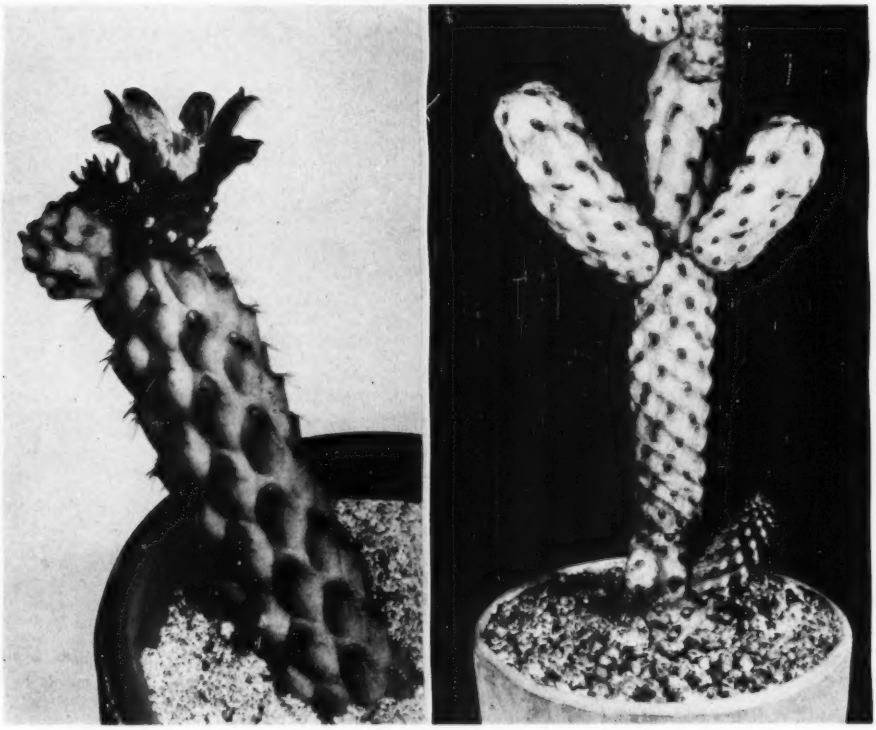
All these things are fully covered, of course, in different places in the various volumes of the JOURNAL, but a list of references would hardly suffice, for it will soon be impossible for the beginner to consult back volumes, and he wouldn't take the trouble either. And so long as it is "le premier pas qui coute," a topic popularly introduced to the untechnically minded might make friends for its immediate further study.

This is just an old woman's notion and I hope you will take it only for what it is worth. With renewed expression of appreciation of the wonderful JOURNAL

MRS. H. C. DORNE

WANTED—*the whereabouts of H. O. Bullard*

Mr. A. R. Davis of Marathon, Texas, reports that member *at large*, H. O. Bullard, visited him in Marathon, Texas. A trip was made to the Big Bend Country which is a cactus collector's heaven. Can you imagine H. O.'s expression? Oklahoma has also reported on H. O. and they too enjoyed his visit.



OPUNTIA (Cylindropuntia) BREVISPINA sp. nov.

By HOWARD E. GATES

Reviewed and accepted by the Nomenclature Committee

Latin diagnosis prepared by Dr. Ira L. Wiggins, Stanford University.

Frutex 1 m. alta et lata, ramis lignosis 4 cm. diametro patentibus, articulis 4-25 cm. longis coreuleo-viridibus; tubercula 2 cm. longa 1 cm. lata; jus viscidus aquatus areolae obovatae 4 mm. longae 2 mm. latae tomentum densum in parte supero ferens; folia caduca 3 mm. longa 1 mm. diametro; spinae laterales 5 deflexae et patentes aciculares brunnei, spinis inferioribus longissimis; spina centralis solitaria 1-2 mm. longa porrecta de parte infero areolae; flores diurni rotundi 3 cm. longi 2.5-3 cm. lati, tubo floris viridi 5 mm. longo, squamis sublanceolatis purpurariis, perianthii segmentis exterioribus 10 integris obtusis rubro-purpurariis 1 cm. latis et longis, segmentis interioribus 5 truncatis aut emarginatis 2 cm. longis 1 cm. latis; stamina numerosa 6-8 mm. longa viridia, thecis 1.5 mm. longis flavis; stylus 1.8 cm. longus ad basin viri descens prpe apicem rubescens, lobiis stigmatis 5 ca. 2 mm. longis albo-viridibus; fructus subglobosus 1.8 cm. longus 2 cm. latus flavus, umbilico 5 mm. profundo; semina globosa aut compressa 3-3.5 mm. lata straminea.

Roots fibrous; plants shrubby to 1 meter high by 1 meter wide; central stem blue green to brown, 4 cm. in diameter; skeleton woody, reticulated, cylindrical; reticulations elongated diamond shape, 2.5 cm. long by 5 mm. wide; branches spreading in irregular whorls, cylindrical, slightly clavate in youth, rounded at apices, 4 to 25 cm. long by 4 cm. in diameter; skin tough, thin, blue-green often shading to reddish-brown, slightly cerulate; tubercles 2 cm. long by 1 cm. wide, low, rounded, arranged in 8 to 10 spiral rows almost forming ribs by confluence; axils naked; sap colorless, viscid; areoles toward top of tubercles, obovoid, 4 mm. by 2 mm. spaced 14 mm. apart bearing pads of short, dense, gray felt in their upper portions; glochids apparently lacking, leaves on new areoles not persistent, 3 mm. long by less than 1 mm. in diameter, conical, blue-green, brown tipped; radial spines 5 from lower portion of areole, 1 to 5 mm. long, acicular, spreading, deflexed, lower one longest, dark brown; central spines usually 1, 1 to 2 mm. long, acicular, dark brown, por-

rect from lower portion of areole, sheathed on tip, no auxiliary hairs or glochids; flowers diurnal, in circle from areoles at apices of new branches, one per areole, rotate, 3 cm. long by 2.5 to 3 cm. wide; tube 5 mm. long, green; scales sub-lanceolate, purplish; ovary 1.5 cm. long by 1.5 cm. wide, hemispherical, green; areoles circular bearing light brown wool and about 12 fine, acicular, spine-like brown bristles, outer perianth segments 10, 1 cm. long, 1 cm. wide, bronzy reddish-purple, obtuse, margins entire; inner perianth segments 5, 2 cm. long by 1 cm. wide, bronzy reddish-purple, tips truncate to emarginate, margins entire; filaments numerous, sensitive, attached to sides of tube, included, 6-8 mm. long, light green, anthers 1.5 mm. elongated, deep yellow; style 1.8 cm. long, columnar, lower third slightly enlarged, light green becoming reddish near tip; stigma lobes 5, so closely grouped as to appear as one spherical lobe, 2 mm. long, greenish white, included; fruit 1.8 cm. long, 2 cm. wide, spherical, deeply umbilicate, occasionally proliferous, yellow; umbilicus conical, 1.2 cm. wide by 5 mm. deep; areoles round, darkly felted with few short acicular deciduous spines; skin smooth, slightly cerulate over low rounded tubercles, very thin, tough; pulp spongy, sappy, yellow; seeds approximately 9, closely packed in center pulp, globular, irregularly flattened by compression from adjacent seeds, surface straw colored, rough; hilium slightly elevated, white.

Type Gates No. 133 from plant collected on Isla Ballena, an islet off the western shore of Espiritu Santo Island, Gulf of California, Lat. 24° 30′ N., Long. 110° 22′ W., Mar. 17, 1931, and deposited in the Dudley Herbarium, Stanford University, Calif. Distribution is apparently confined to Isla Ballena and Espiritu Santo Island on which it was found, from sea level to the highest point explored at four hundred feet. These islands are composed of very dry, rough and rocky hills. Rainfall amounts to three or four inches during the autumn. Summer temperatures probably reach 130° F. with a winter minimum of 35° F.

This species should not be easily confused with other species from Lower California. The branches of *Opuntia alcahes* are nearly hidden by numerous, longer and lighter colored spines. *O. burrageana* has more slender branches with closely set tubercles bearing many short yellow spines, which become brown. *O. cholla* is a larger plant with branches in definite whorls bearing more widely spaced and larger tubercles with heavier spines and pink to purple flowers. *O. prolifera* has more closely set and freely spined tubercles. *O. santa maria* (*Grusonia santo maria*, Baxter) is much woodier with more numerous and stronger spines closely set upon definite ribs.

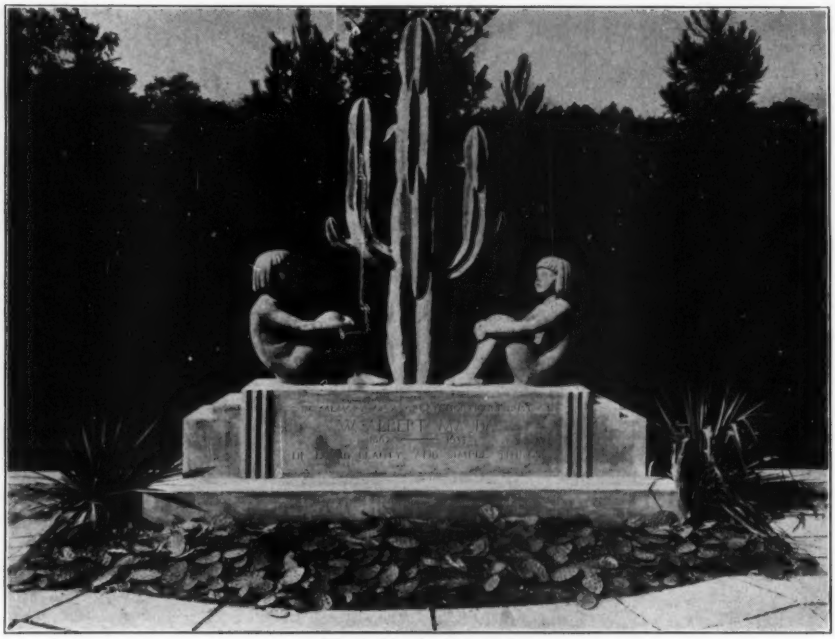
FREE FLOWERING CACTI

By R. W. POINDEXTER

Herewith is a carefully selected list of the most floriferous cacti. These have been selected with a view to being practical for indoor culture and with a view to blooming in the glasshouse as well as outdoors. For this reason, for instance, all Opuntias are omitted, although many of them are among the freest bloomers of all, for the reason that I have not had experience with them under glass. The list is edited with a special selection of seven plants which, in my experience, are the most free and reliable bloomers of all. All of these bloom repeatedly throughout most of the year. Many Mammillarias are extremely free flowerers, but the flowers are so insignificant that I have not paid much attention to the number produced throughout the year. A selection of Mammillarias should, by all means, be included. Many excellent bloomers have been omitted with a view of making the list shorter and having it contain only the most outstanding ones.

I. Seven most reliable bloomers:
- *Astrophytum myriostigma*
- *Cleistocactus baumannii* (most floriferous of all out of doors, not checked in greenhouse)
- *Echinopsis eyriesii*
- *E. leucorhodantha*
- *E. multiplex*
- *E. oxygona*
- *E. polyancistra*
- *Epiphyllum* (syn. Phyllocactus) *ackermannii*
- *Hamatocactus setispinus*
- *Neoporteria napina* (very floriferous in doors or out—should be grafted)
- *Wilcoxia australis* (best grafted)

II. Other free bloomers:
- *Echinocereus perbellus*
- *E. papillosus*
- *E. pentalophus*
- *Echinopsis hybrids*
- *Eriocereus* (Harrisia) *jusbertii*
- *E. martinii*
- *Gymnocalycium denudatum*
- *G. mihanovichii*
- *G. quehlianum*
- *G. venturianum*
- *Lobivia binghamiana*
- *L. corbula*
- *L. pseudocachensis*
- *Mammillarias* (many)
- *Monvillea diffusa*
- *Nopalxochia phyllanthoides* (or Phyllocactus German Empress which appears to be practically identical)
- *Notocactus apricus*
- *N. haselbergii*
- *N. ottonis*
- *Phyllocacti* (many hybrids)
- *Rebutia minuscula*
- *R. steinmannii*
- *R. violaciflora*
- *Schlumbergera species*
- *Selenicereus spinulosus*
- *Zygocactus truncatus*
- *Zygocactus hybrids*



W. A. Manda Memorial

Courtesy Florists's Exchange and Horticultural Trade World

W. A Manda Memorial Unveiled

An event of horticultural interest occurred on Sunday afternoon, Oct. 16, when the W. A. Manda memorial at Meadowland Park, South Orange, N. J., was unveiled and dedicated before a large audience.

It will be recalled that W. A. Manda was killed on the railroad five years ago, and by his death the trade lost one of its best known and most informed plantsmen, his fame being world wide. A native of Bohemia, the 14th child of a forester, he started horticultural work at the age of 12 and at 15 held a certificate as assistant horticulturist. He then began traveling, spending two years in Vienna on the royal estate of the Louvre, afterwards to England. By the time he was 21 he had learned four languages besides his own. Coming to the U. S. A. when 21, he was at once offered the curatorship of the Harvard Botanical Garden. Five years later he, with James R. Pitcher, founded the firm of Pitcher and Manda, a concern that had no rival in the U. S. A. It was, however, at least 25 years ahead of its time and it finally failed, after which Mr. Manda started his famous horticultural establishment at South Orange. He experienced many ups and downs, but by arousing public interest in cacti and succulents he after 1920, achieved his ambition to modernize his greenhouse as a gift to his nephews, Albert and Robert Manda, whom he trained to carry on.

His accidental death when still vigorous, although well over 70, caused a general feeling of loss in South Orange as he was a great lover of children and for years served as head of the community Board of Recreation. Thousands of people visited the nurseries during the time the body lay in state in the great packing room, the place being a veritable bower of flowers.

Some time after his death, the South Orange Garden Club started a fund to provide a memorial, subscriptions coming from all parts of the world, and about two years ago it was decided to erect the memorial in Meadowland Park. Miss Brenda Putnam was deputed to design and execute the statuary, and prompted by what she learned about Mr. Manda's love for cacti and children, she developed an unusual piece of work consisting of a tall cactus with a child on either side, the whole mounted on a broad base surrounded by a Lily pool and a rugged rock garden.

At the unveiling, many fraternal and civic organizations participated, children being the guests of honor. Mrs. Lawrence Wilson, president of South Orange Garden Club, was one of the chief speakers, Amelia Manda, six-year-old grandniece of the deceased citizen, having the privilege of unveiling the memorial. The inscription on which reads: "To the memory of a great horticulturalist, W. Albert Manda, 1862-1933. He loved beauty and simple things."

"MY TEN FAVORITE CACTI"

It is very hard indeed to choose ten favorite cacti when there are so many really beautiful plants. After much deliberation I submit the following as favorites in my collection:

Notocactus scopa, a perfect jewel reminding one of an opal with its soft tones and brilliant fires.

Aztekium ritterii is one of the oddest of all this group of odd plants, also free flowering.

Echinocactus grandis with its deep purple bands on bluish green is outstanding and attractive.

Astrophytum myriostigma var. *tetragona,* the true "Bishop's Cap" with its four plump angles blooms all summer. I find all the Astrophytums flower freely except the *ornatum* species and who cares when it's such a beauty?

Gymnocalycium mihanovichii is a tapestry of maroon and dark green bearing many flowers of a lighter green shade.

Pelecyphora asselliformis is another oddity which attracts one to it in a collection. Has a very unusual spine arangement.

Mammillaria tetracantha bears a profusion of bright pink flowers which form a crown for this lovely dark green plant. I have found it the most free flowering plant in my collection.

Parodia auriespina is outstanding in my collection as a really golden plant. Has many large yellow blooms.

Echinofossulocactus lloydii is a really beautiful plant. Has many wavy ribs, enough flattened spines for interest.

Ariocarpus strobiliformis is a very interesting plant with large violet-rose flowers with a rose-like fragrance. The plant is another of those really different ones.

MRS. S. P. SEELA, Oklahoma City, Okla.

TEN FAVORITE HAWORTHIAS

The "Haworthia Pest" is here again. At least I can assure you that I am apt to become a pest for I believe that the Haworthias are one of the largest groups of plants, with perhaps only the Mammillarias and Opuntias running it a close race for this position. Being a fanatic on this genera I am bound, in my mediocre and amateurish way, to force this family of succulents upon the members of this Society with a hope that I can influence them in some small way to a closer appreciation of Haworthias.

The Society has been calling, for several months, for a list of its members' "Ten Favorite Cacti, or Succulents" and I am going to comply; after first making a subtle change in this request by giving my ten favorite Haworthias.

1. *H. cuspidata* and *cymbiformis.* I place these two plants first because, while I know the plants apart at sight, I cannot in my amateurish way, write the difference between them. On the other hand *H. cymbiformis* was the first plant of this genus in my collection.

2. *H. albicans.* Because it is the most unusual, being more like an Aloe or Gasteraloe in texture and appearance except that it bears its off-sets between the leaves instead of from the roots as is the habit of the Aloes in my collection.

3. *H. arachnoides.* This is the tightest growing and most picturesque with its translucent windows and hair-like protuberances on its sides and keel.

4. *H. attenuata.* Being the most graceful as well as beautiful with its rows of tubercles.

5. *H. tortuosa* var. *pseudorigida.* For its ability to "take it." This plant arrived in my possession with its roots covered with mealy bugs. The roots were amputated and the whole plant soaked four times in a strong solution of Black Leaf 40 and is now flourishing as bravely as my other Haworthias.

6. *H. atrovirens.* For I believe this to be the smallest of the window plants.

7. *H. tesselata* var. *parva.* For being a successful combination of "warty" protuberances and translucent windows.

8. *H. chalwinii.* Because of its form and symmetric pattern of the tubercles.

9. *H. maughii.* Because I want this plant the most and have not been able to get it.

10. *Aprica pentagona.* I include this because it was listed as *H. aprica,* but as I could not find it listed by Triebner my curiosity was aroused. Upon its arrival my suspicions were confirmed. It was *Aprica pentagona* and therefore became the only plant of this species in my collection.

I think it rather unfair that the above *Aprica* is the only one I have been able to find listed in our nurserymen's catalogues and price lists. The number of Haworthias offered for sale here in America is positively mediocre considering the fact that Triebner of S. W. Africa lists several hundred. I find that there is a pitiful number of pictures and descriptions of these plants available to enable one to *properly* identify their plants. *Succulents Other Than Cacti* by A. J. van Laren being perhaps the best pictorial reference book, but it also is most inadequate.

I feel that the time has come when something advanced must be undertaken with regards to Haworthias and a complete sales list of this species should be made available. It seems strange that Haworthias have been advertised for sale only twice in our *Journal* within the past ten issues.

W. E. J. GOTTSHALL, Va.

THE STAPELIEAE—By Alain White and Boyd L. Sloane. The first book on Stapeliads. Published in 1933. A very few of this first edition available at $3.00. Express charges collect. This edition will be a rare book item.

MESEMBRYANTHEMA by Brown, Tischer, Karsten. $8.75.

MY TEN FAVORITE CACTI AND WHY

Aporocactus flagelliformis—With long thin pendant stems, golden spines, and purplish pink flowers.

Astrophytum asterias — With symmetrical grooves and ridges rounded, on top of which appear at regular intervals soft velvet, button-like tufts of spiny material. The white fuzzy bud which opens into a yellow flower with vermillion bases—and last but not least, no spines.

Cephalocereus senilis—With its white-haired tips; spines—yes, but hoary with beauty, not age; "The Old Man," growing taller and and straighter, and more majestic each year instead of more bent with its years.

Coryphantha humamma—With its clear bluish green body, large tubercles tipped with a tuft of wool, out of which a protecting circle of 5 to 12 light brown spines radiate. These tubercles spiral up to its crowning glory—brownish-green buds, which open up to be cups of deep yellow.

Echinocactus horizonthalonius—With its grayish blue-green body armed with long radiating spines which are spaced at regular intervals on the rounded ridges at its fat body. Its exquisite silvery pink bloom appears from the brownish felted mass at the depressed center and pushes the formidable spines away to disclose its beauty.

Echinopsis multiplex—With its pin-cushion-like body of medium green covered ridges armed with yellowish-brown spines above which rises the long slender throated bud covered with dark hair, which opens into a 4 or 5 inch soft pink-petaled tube from 7 to 9 inches long.

Hamatocactus setispinus—With its lacy spines covering a ridged green globular, slightly truncated cone from the top of which appears a succession of conical buds. These are like rare designs with their overlapping scales of red-brown with light-cream edges. The blooms are silvery yellow with vermillion centers.

Mammillaria elongata—With its straw-colored lacy spines like stars from each of the mammae. It resembles a rare piece of lace underlaid with green. Through this veil the small white blooms push their way.

Mammillaria plumosa—With its feathery whorls of spines which most nearly resemble the soft down on birds. The blooms are small white with a red streak running down the center of each petal.

Thelocactus bicolor—A gem with reddish purple spines radiating from the tubercles out of which about four straight yellow spines rise toward the crown. From this center a purplish-violet bloom emerges. JOHN E. RODGERS, Ohio.

EXACT LOCATIONS

In the August number of the *Cactus and Succulent Journal* is a valuable and well-written article on "Elephant Trees." This article stimulates certain queries in the mind of a botanist. I quote from the article as follows:

Page 20, col, 2, "a huge grove of about a thousand trees was found in San Diego County, California." What is the location of this grove? Is it the same locality as the station for *Elaphrium microphyllum* (Bursera microphylla) on Fish Mountain between Fish Creek and Carrizo Creek which has been known since about 1914, or is it some other locality? Fish Mountain (at the east end of the Vallecito Mountains) is a marked bulk in the landscape of the southwestern Colorado Desert from either the Borrego road or Carrizo road.

Page 20, legend. "Dry Lake Valley, Calif." Where is Dry Lake Valley? In San Diego County there are a number of dry lakes and the people use the term Dry Lake Valley for several of them. Three of them at least are recorded on maps and in the *Jepson Index of Place Names in California.*

Page 21, col. 2. "On investigation, the trees in Martinez Cañon proved to be *Elaphrium microphyllum.*" Where is Martinez Cañon? There is a Martinez Cañon in the Santa Rosa Mountains in Riverside County. The general drift of the article, however, seems to imply that all statements refer to San Diego County and in consequence there must be a Martinez Cañon in San Diego County. If, on the other hand, there are trees of this species in Riverside County, that fact is very important, and I am highly desirous, in such case, of securing a definite locality.

If you can conveniently make a reply to these queries I shall be grateful. Let me assure that such specific facts (if available) will represent a definite addition to our botanical knowledge of the occurrence of *Bursera microphylla* in California.

W. L. JEPSON.

It is indeed regrettable that definite localities cannot be given, due to the fact that greedy vandals would soon remove every plant. Some of our rarest native plants have become extinct and other species are being rapidly depleted. Even in Utah, the exact location of *Utahia sileri* is being withheld from the public. Let us hope that a time will come when these deplorable conditions will not exist and respect for plants will replace the prevailing greed. S. E. H.

THE CACTUS BOOK
by
A. D. Houghton

From this book you will learn the secrets of successful watering, how to grow Cacti from seeds, how to propagate the rare species by grafting, how to hybridize, how to grow indoors in pots, and on window sills, how to purchase and trade to get new sorts and what kinds to grow for different effects. Also introduces you to more than 1,000 different kinds of Cacti with information for selecting the types you need for every purpose and location.

Cactus & Succulent Society of America
Price $2.25

CACTI FOR THE AMATEUR—Haselton

A complete book on culture and propagation. An ideal Christmas gift for that cactus friend. 140 pages and 160 illustrations. Color plate of 110 named cacti. Answers all of the questions of a beginner. A $2.25 book for $1.00 (board bound 50c extra). Order now while available at this price. A companion book on Succulents is in preparation. Please furnish Express delivery address rather than box number.

ABBEY GARDEN PRESS
Box 101, Pasadena, California

THE CACTUS AND ITS HOME—By Forrest Shreve. Written by a member of the Society who is in charge of The Desert Laboratory of the Carnegie Institution. Describes what a cactus is, how it is constructed, names, tribes, families, cultivation and distribution. Based on scientific investigation, a great many questions are answered. 45 interesting illustrations, $1.50.

KAKTUS ABC, by Curt Backeberg and F. M. Knuth. 432 pages, fully illustrated. Many new species and genera. Written in Danish, but is a necessity for every cactus library. The lists show 500 more species than were recognized by Britton and Rose Cloth bound $5.00.

LES CACTEÉS & PLANTES GRASSES (French) by P. Fournier. $3.50.

CACTUS by Laura Armer. $1.50.

CACTUS CULTURE by Ellen D. Schulz. $2.50.

THE STUDY OF CACTI by Vera Higgins. 164 pages 6x9, 14 illustrations and a double spread tabulated Classification of all genera listed by Britton and Rose. Among the chapters are: Classification, Nomenclature showing the derivation and meaning of the names, Geographical Distribution each genera. Cultivation, Descriptions of the Genera. A valuable summary of the monograph THE CACTACEAE. $2.25.

"THE STAPELIEAE" by White and Sloane
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A monograph in three volumes containing 1200 pages; 39 pages in full color in addition to the 1250 illustrations. Distribution of Species with maps in color, chronological notes, Glossary of terms, and complete Keys add to this valued work. Price $12.50 by express; $14.00 foreign postpaid.
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REPRINT IN PAMPHLET FORM

"Notes on the Genus Echeveria," by Eric Walther
12 pages..... 25c
"Collecting Succulents in Mexico," by Eric Walther
16 pages..... 25c

THANK YOU, THANK YOU

The following kind notes are one of a few of the hundreds being received. When readers will take the time to express their appreciation, then the author of a book has received his compensation in full.

Your book on "Cacti for the Amateur" is wonderful. I am more than pleased. It is just what I need.
DAISY M. HOLBROOK, Huntington Park, Calif.

This book is such a remarkably fine piece of work that I am ordering additional copies. You are certainly to be congratulated on having prepared such a beautiful and useful volume. I am sure that everyone who has any sort of cactus collection will wish to have a copy.
CLARK B. MILLIKAN,
California Institute of Technology, Pasadena.

Though I've only leafed through it and looked at the illustrations, I'm anticipating many joyful hours in the reading and study of "Cacti for the Amateur." It seems filled with the things that an amateur collector of cacti and succulents, like myself, craves to know. A lot for the money.
MRS. FORREST HUSS, Afton, Iowa.

I received my "Cacti for the Amateur" a few days ago and wish to congratulate you for filling a long felt want of the amateur collector. I am sending a copy to my nephew in New Rochelle, N. Y., hoping it will get him interested in this wonderful hobby of cactus collecting. A. WM. VOSS, Brooklyn, N. Y.

Received my copy of "Cacti for the Amateur" today and I certainly feel that for once in my life I have secured a real bargain and am very pleased with the book. It is all that you say and more. I enjoy the "Cactus and Succulent Journal" and look forward to each issue.
MRS. NELLIE DIEZMAN, Bellingham, Wash.

This book sounds like the one I have been hoping to find for years, and the price is another reason for rejoicing.
ANNA L. SPINDLER, Oregon.

I think your book on "Cacti for the Amateur" is just what was needed as a guide for the amateur, and I enjoyed reading it very much. It should prove helpful to a great number.
JAMES GERDEMANN, Warrenton, Mo.

I surely do enjoy your cactus book. It's what I've been looking for for some time. I couldn't find anything to speak of, either at our public library, or at our "Garden Center." I see you are going to put one out on "Succulents," too. I'm glad to know it, as I will want one of those, too.
MRS. R. G. WOODLING, Ellet, Ohio.

I like "Cacti for the Amateur" very much. It is a grand book, full of very useful information. Thanking you many, many times for the pleasure I shall have from my book.
MRS. L. M. HILL, Windsor, Calif.

I received the "Cacti for the Amateur" sooner than I expected. It is fine and I identified an unlabeled plant in my collection ten minutes after it came.
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